

FIG. 1 is a block diagram of a system for self-learning and production. The system includes a data source (22) providing data to a model structure (24). The model structure (24) is used for evidential reasoning (26), which leads to production (14) and self-learning (12). The self-learning (12) process involves machine learning (20) and example spreadsheets (18). The system also includes expert(s) (16) who interact with the machine learning (20) process. The final output is a decision and explanation (28).

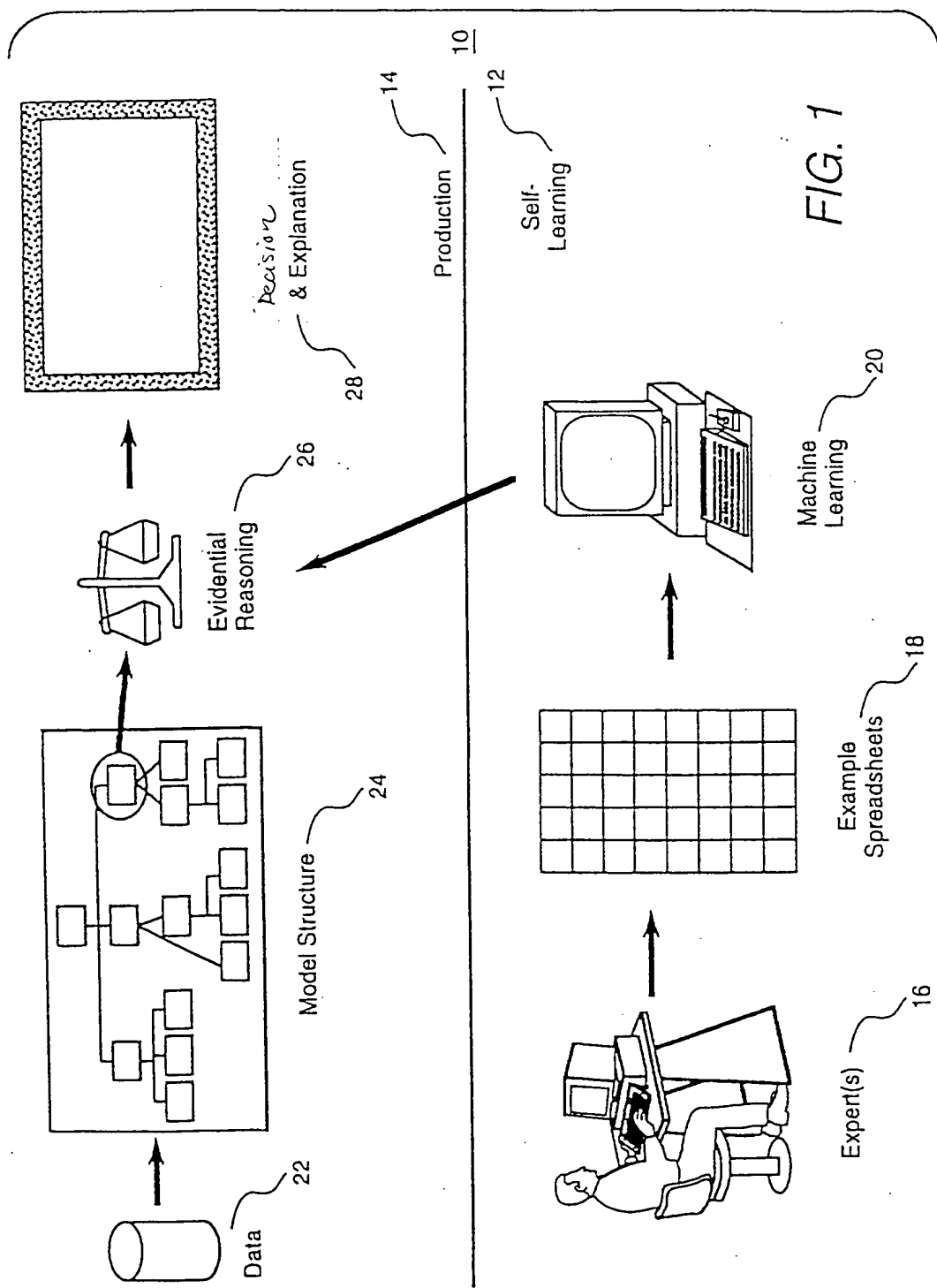


FIG. 1

FIG. 2

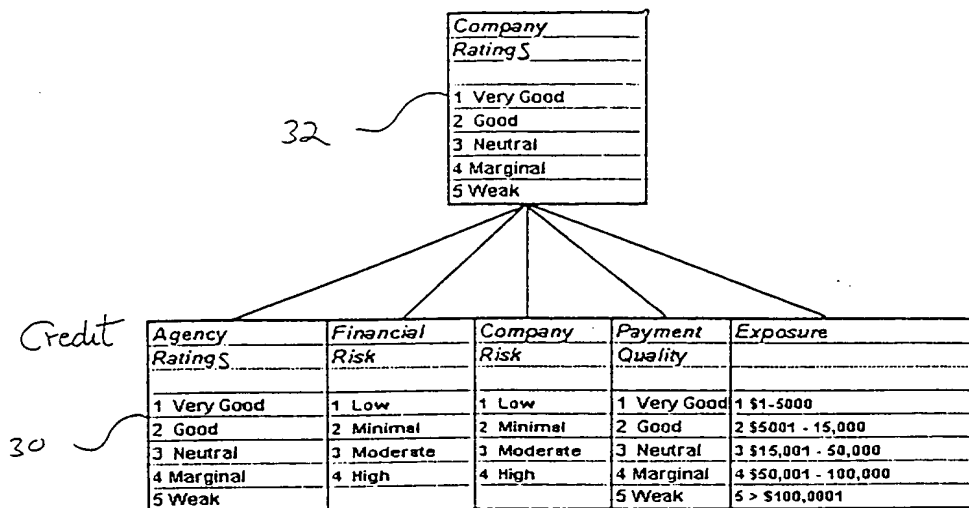


FIG. 3

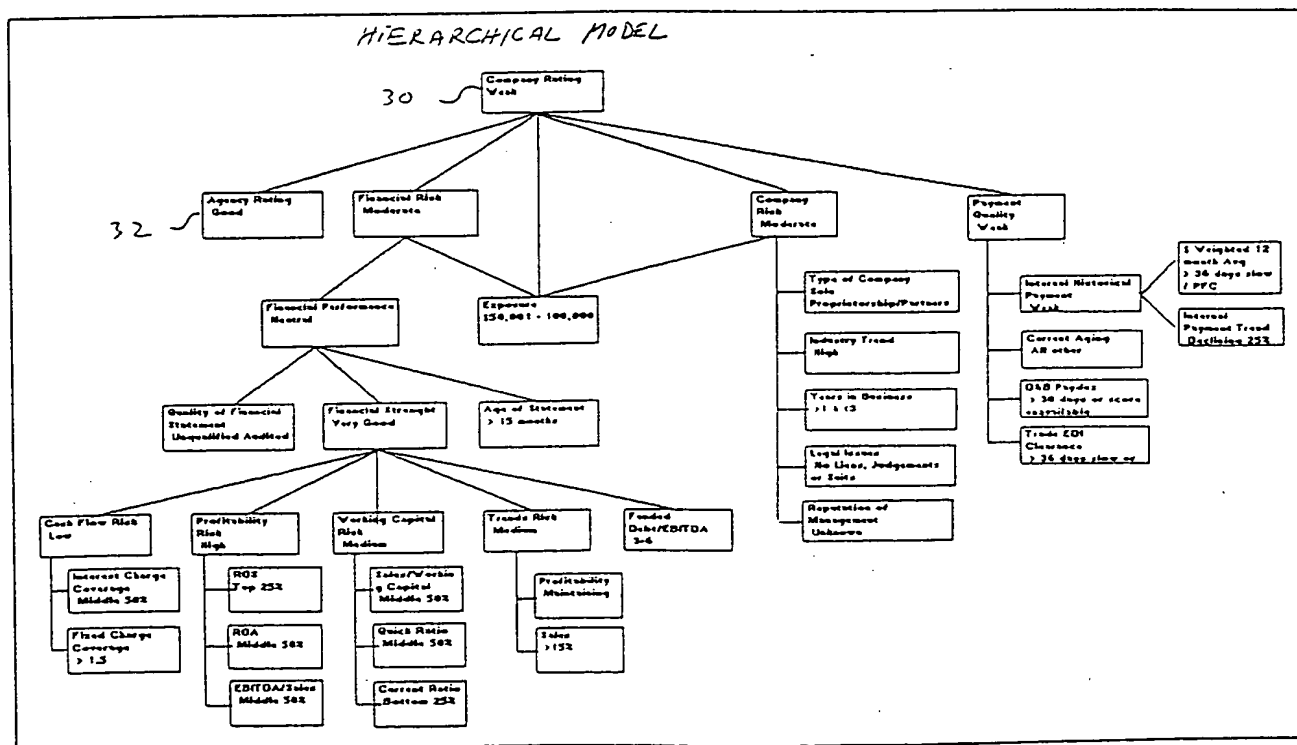


FIG. 4

75

D&B Mapping of Rating Data (e.g., from D&B) for Credit Agency Ratings

1. Very Good	2. Good	3. Neutral	4. Marginal	5. Weak
SA1	3A2	SA3	BB3	SA4
SA2	2A1	4A3	CB3	4A4
4A1	2A2	3A3	CC3	3A4
4A2	1A1	2A3	DC3	2A4
3A1	1A2	1A3	DD2	1A4
	BA1	BA3	EE2	BA4
	BA2	DC2	FF2	BB4
	CB1	DD1	GG2	CB4
	CB2	EE1	HH2	CC4
	CC1	FF1	IR2	DC4
	DC1	GG1	2R2	DD3
		HH1		DD4
			NL	EE3
			--	EE4
			NQ	FF3
			ER1	FF4
			ER2	GG3
			ER3	GG4
			ER4	HH3
			ER5	HH4
			ER6	IR3
			ER7	IR4
			ER8	2R3
			ERN	2R4

FIG. 5

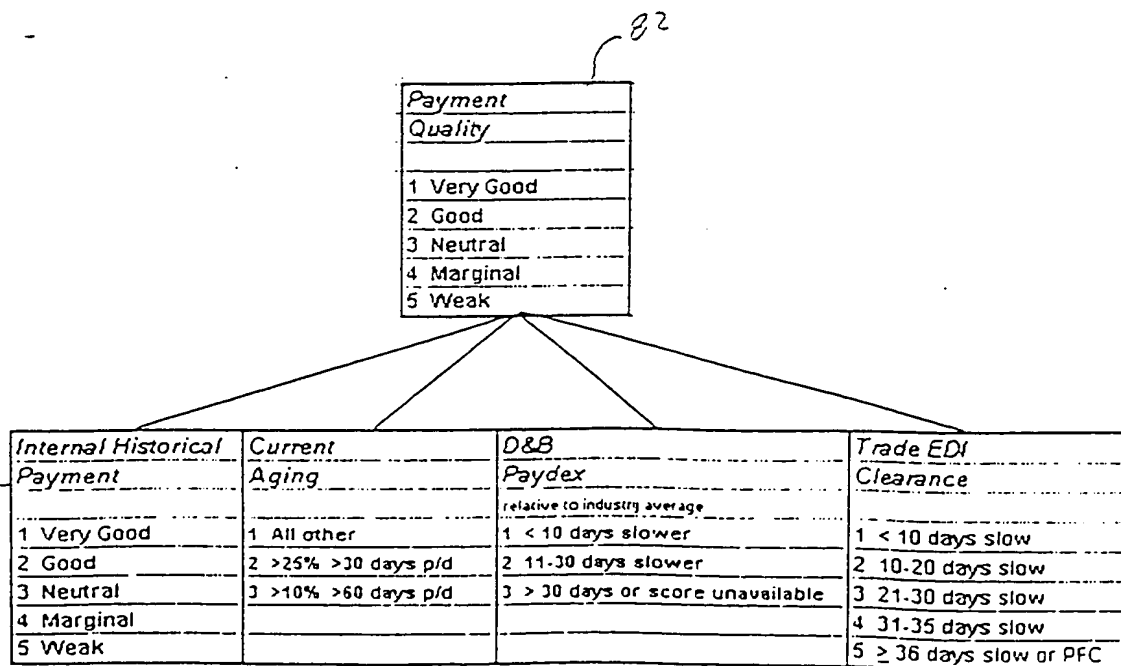


FIG. 6

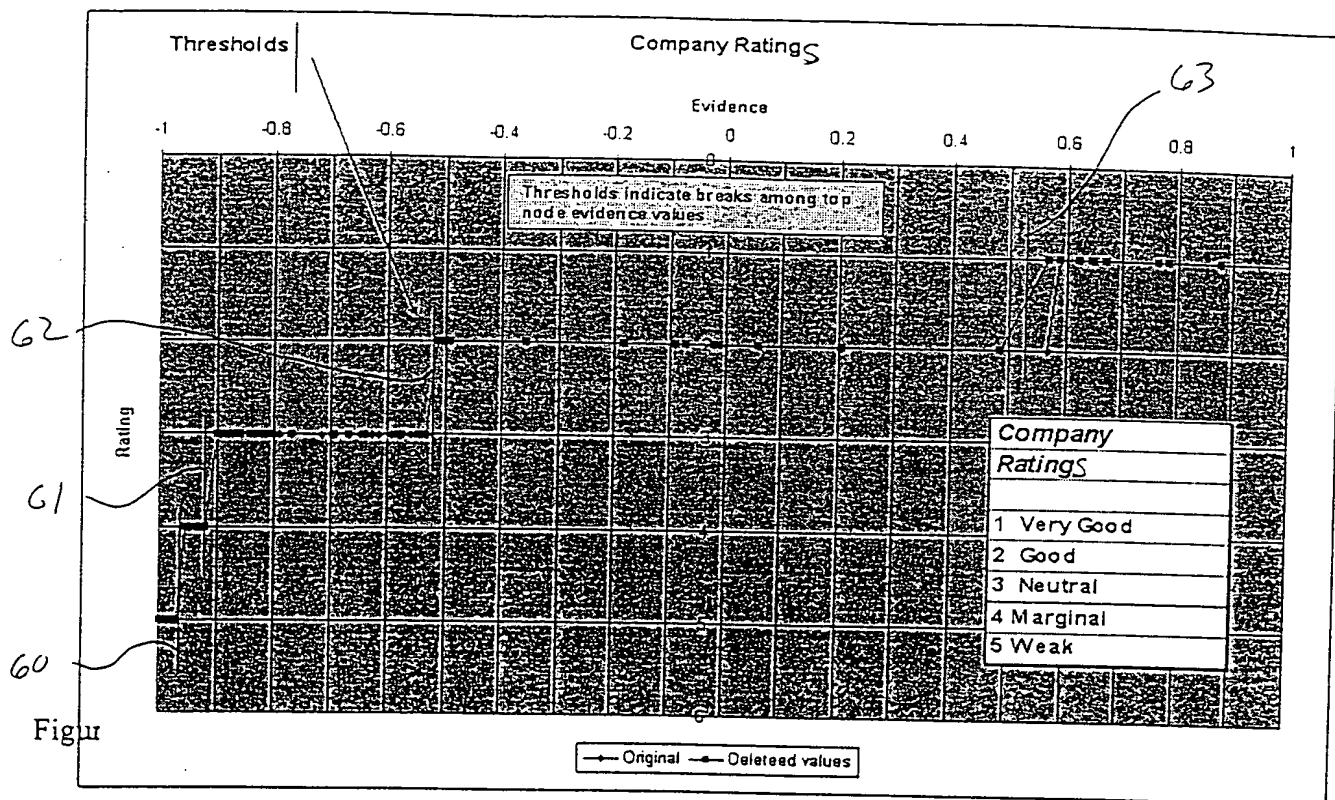


FIG. 7

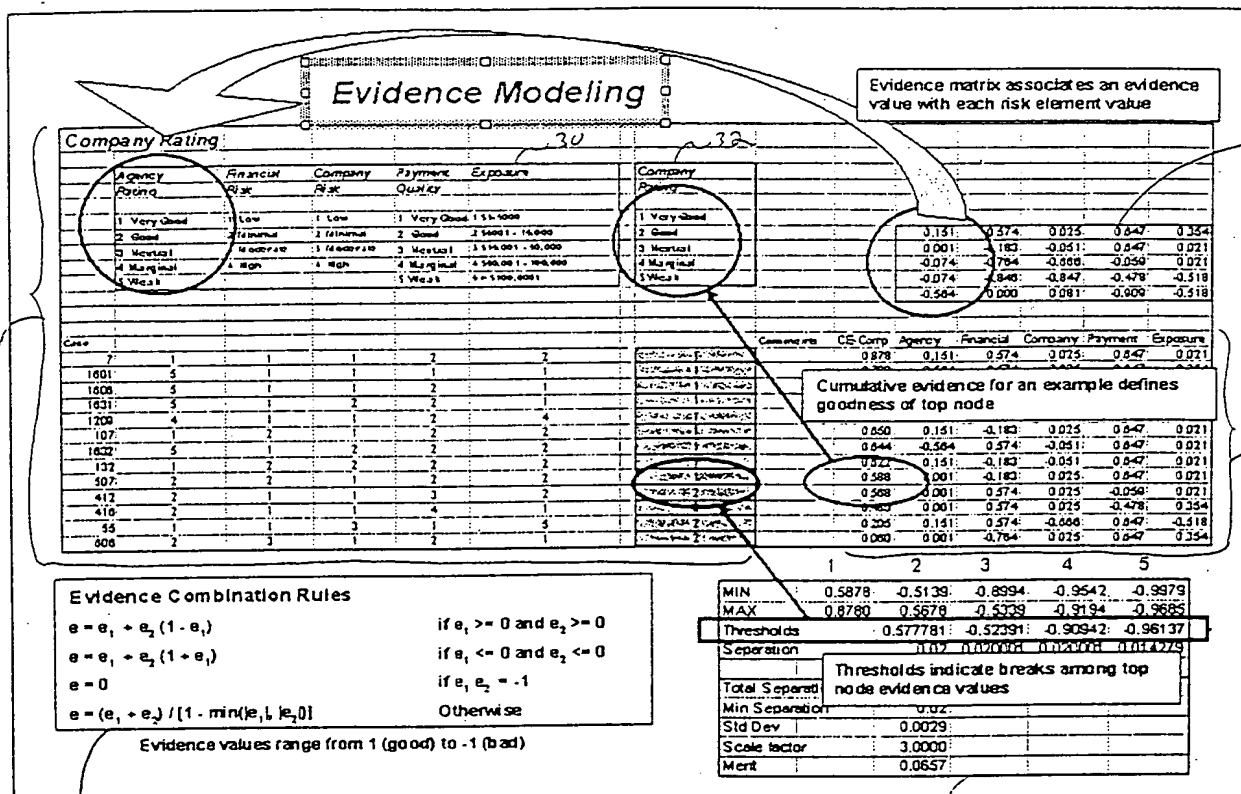


FIG. 9

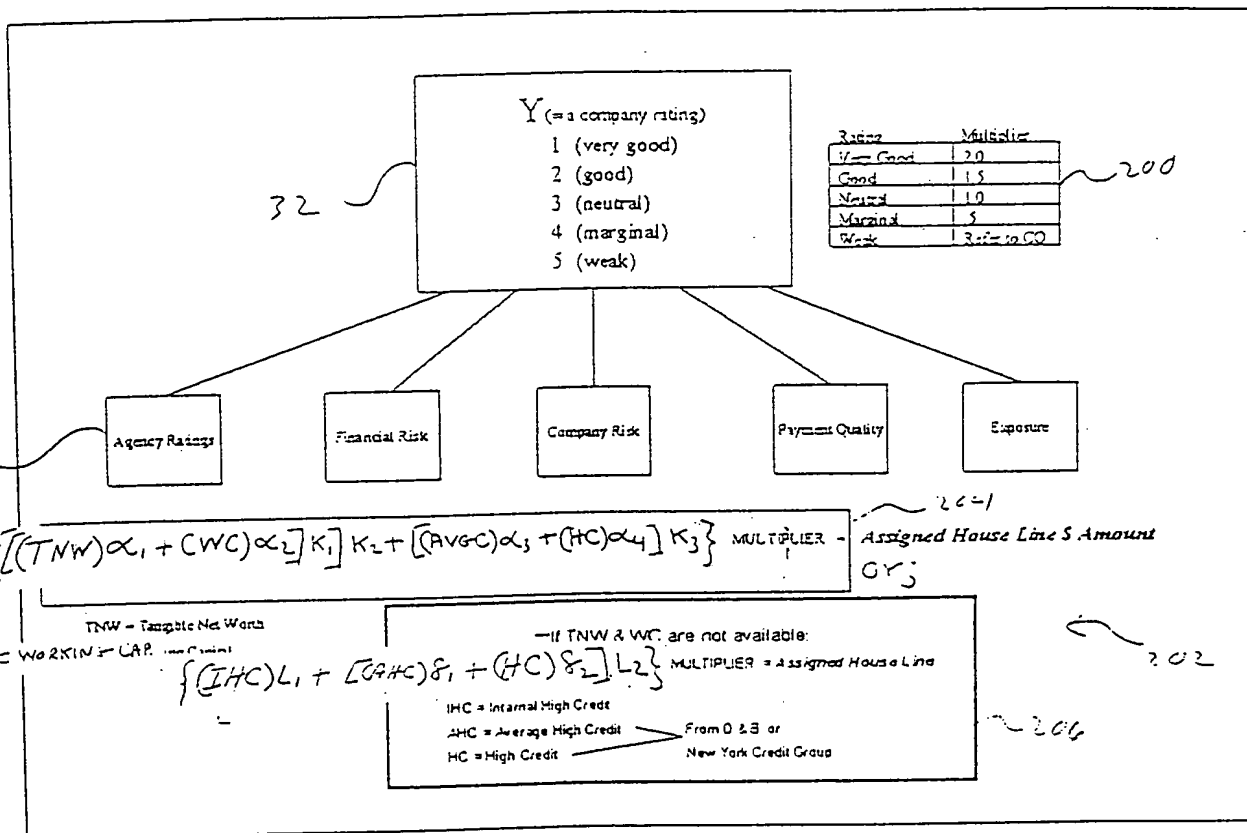


Figure 7

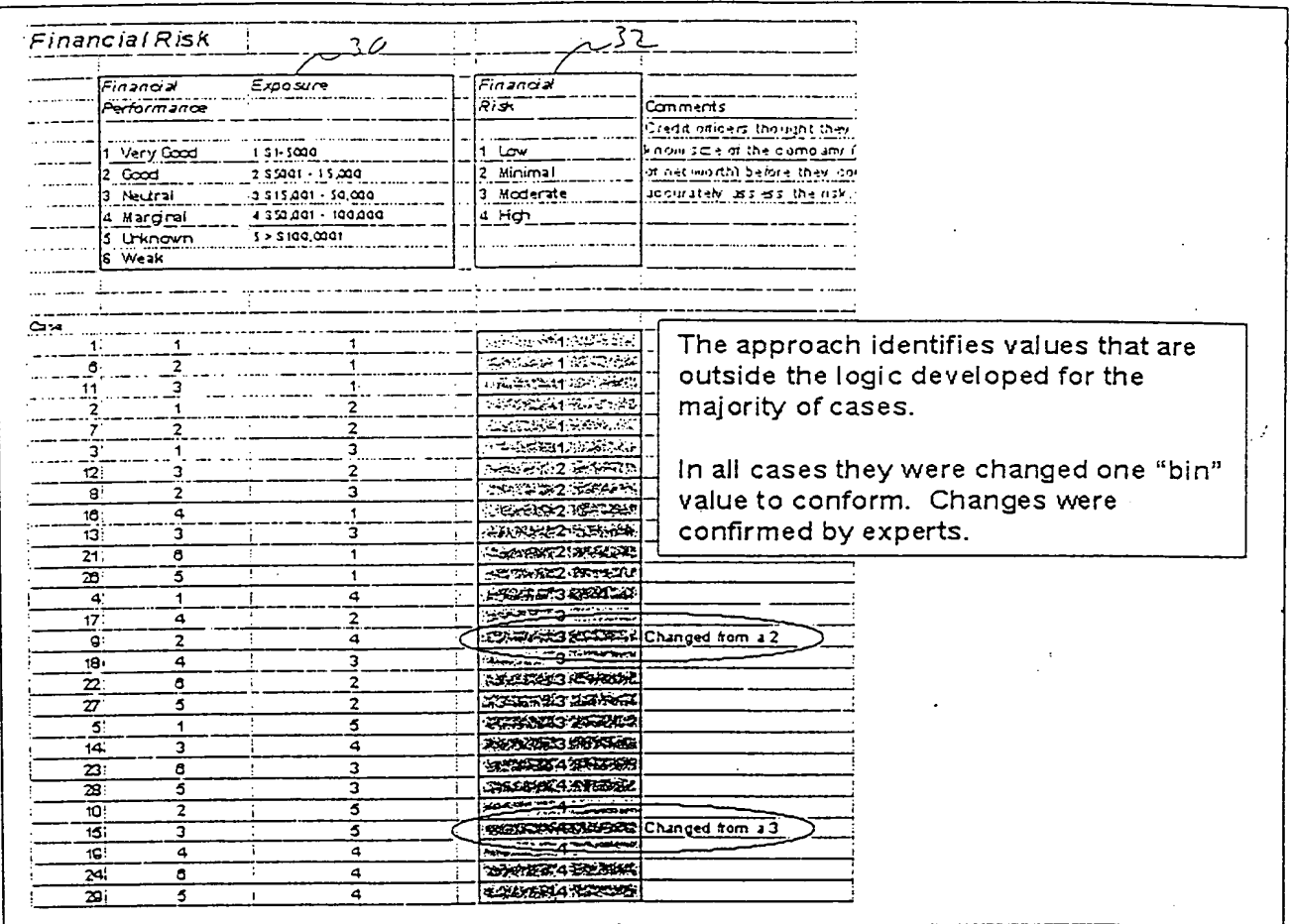


Figure 8

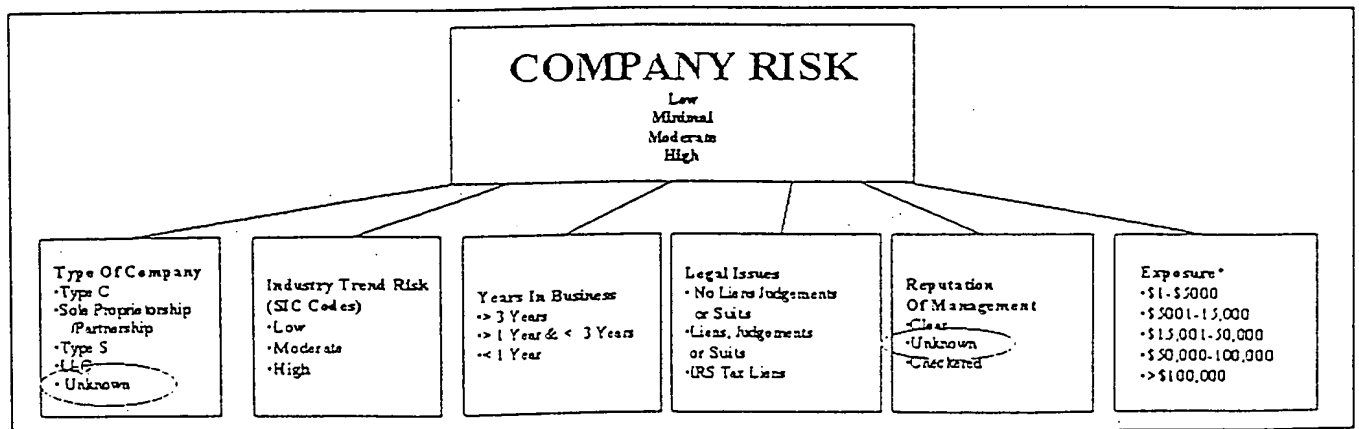


FIG. 12

Description: Test Case 4

Inputs	
\$ Weighted 12 month Avg	2: 11-20 days slow
Internal Payment Trend	2: 24% to 24% (or Unknown)
Sales/Working Capital	2: Middle 50%
Quick Ratio	2: Middle 50%
Current Ratio	2: Middle 50%
Profitability	3: Down > 10%
Sales	4: Declining
ROS	3: Bottom 25%
ROA	3: Bottom 25%
EBITDA/Sales	3: Bottom 25%
Agency Rating	4: Marginal
Exposure	5: \$100,0001
Type of Company	5: Type C
Industry Trend	1: Low
Years in Business	1: > 3
Legal Issues	1: No Liens, Judgements or Suits
Reputation of Management	3: Checkered
Quality of Financial Statement	1: Unqualified Audited
Age of Statement	1: < 6 months
Funded Debt/EBITDA	3: > 6 or < 0
Fixed Charge Coverage	1: > 1.5
Interest Charge Coverage	3: Bottom 25%
Current Aging	1: All other
D&B Paydex	2: 11-30 days slower (or Unknown)
Trade EDI Clearance	2: 10-20 days slow

Run Model

Company Rating Marginal

Net Worth \$80

Working Capital \$11,005

Avg. High Credit \$200,000

High Credit \$150,000

Internal High Credit \$108,852

Base Credit Line Multiplier 0.5

House Line \$54,000

FIG. 13

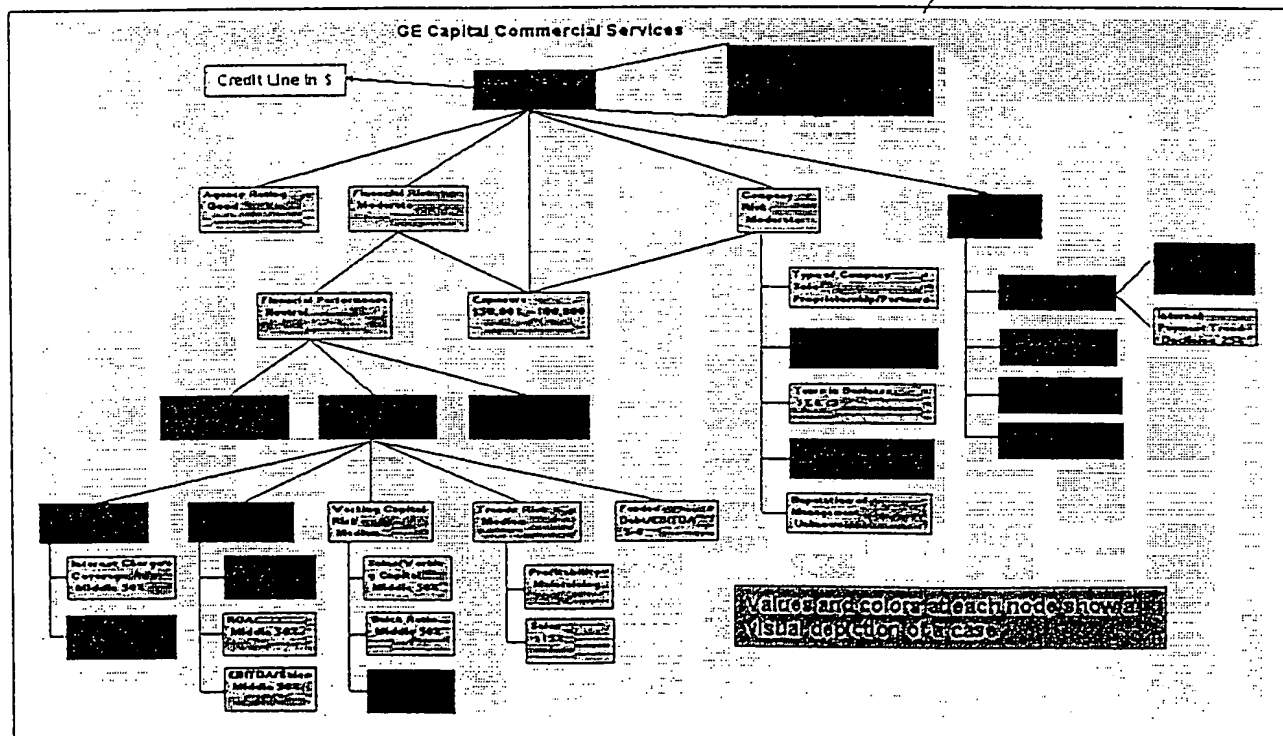


FIG. 14

500

GE Capital Commercial Service Test Case 4	
House Line	\$54,000.00
The Overall Company Rating of:	Marginal
Was based on:	
An Agency Rating of:	Marginal
A Financial Risk of:	High
An Exposure of:	> \$100,000
A Company Risk of:	Moderate
A Payment Quality of:	Good
The Financial Risk of:	High
Was based on:	
A Financial Performance of:	Marginal
An Exposure of:	> \$100,000
The Company Risk of:	Moderate
Was based on:	
A Type of Company of:	Type C
An Industry Trend of:	Low
Years in Business of:	> 3
Legal Issues of:	No Liens, Judgements or Suits
A Reputation of management of:	Checkered
The Payment Quality of:	Good
Was based on:	
An Internal Historical Payment of:	Good
A Current Aging of:	All other
A D&B Paydex of:	11-30 days slower (or Unknown)
A Trade EDI of:	10-20 days slow
The Internal Historical Payment of:	Good
Was based on:	
A Weighted Monthly Average of:	11-20 days slow
A Payment Trend of:	24% to -24% (or Unknown)

The Financial Performance of:	Neutral
Was based on:	
A Quality of Financial Statement of:	Unqualified Audited
A Financial Strength of:	Very Good
An Age of Statement of:	> 15 months
The Financial Strength of:	Very Good
Was based on:	
A Cash Flow Risk of:	Low
A Profitability Risk of:	High
A Working Capital Risk of:	Medium
A Trends Risk of:	Medium
A Funded Debt/EBITA of:	3-6
The Cash Flow Risk of:	Low
Was based on:	
An Interest Charge Coverage of:	Middle 50%
A Fixed Charge Coverage of:	> 1.5
The Profitability Risk of:	High
Was based on:	
A ROS of:	Top 25%
A ROA of:	Middle 50%
An EBITA/Sales Ratio of:	Middle 50%
The Working Capital Risk of:	Medium
Was based on:	
A Sales/Working Capital Ratio of:	Middle 50%
A Quick ratio of:	Middle 50%
A Current Ratio of:	Bottom 25%
The Trends Risk of:	Medium
Was based on:	
A Profitability of:	Maintaining
A Sales of:	> 15%

FIG. 15